Trade Networks, Areal Integration, and Diversity along the North Coast of New Guinea

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THE A. B. LEWIS COLLECTION of material culture from New Guinea and the smaller islands of Melanesia comprises more than fourteen thousand ethnographic objects at Field Museum of Natural History collected during the 1909–1913 Joseph N. Field South Pacific Expedition. This collection (roughly one-third of the Museum's holdings from Melanesia) was assembled by the anthropologist—and former Field Museum curator—Albert Buell Lewis (1867–1940) during his nearly four years of field research in Fiji, the Solomon Islands, the New Hebrides, New Caledonia, Papua, German New Guinea, and Dutch New Guinea.

The Lewis Collection, one of the largest and best documented early ethnographic collections in the world, was amassed to help secure the position of the fledgling Field Museum as a world-class scientific and educational institution. In addition to the astonishing number of cultural artifacts gathered from virtually all of the regions of Melanesia then explored, the museum today also preserves the Lewis archives of nearly sixteen hundred original glass-plate photographic negatives, A. B. Lewis's field work diaries (as well as his expedition correspondence and specimen lists), and sundry other notes, maps, and sketches.

Ironically, despite the size and quality of the Lewis Collection and its associated archives, these remarkable cultural and historical resources have been largely overlooked by anthropologists since the 1930s.

HUMAN DIVERSITY IN NEW GUINEA

The New Guinea region as a whole has long been noted for its extreme cultural and linguistic diversity. Yet while New Guinean societies exhibit considerable cultural variation from place to place, they are usually said to present a common "Melanesian character." This is often described as "a pattern of variations on the same cultural themes"—that is, cultural motifs such as egalitarianism; frequent

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small-scale warfare; men's cults; pig feasts; garden horticulture; and often astonishingly complicated, interlocking patterns of short- and long-range trade and exchange.

The role of trade and exchange networks in the integration of culturally diverse communities in Melanesia has been well documented in several parts of the New Guinea region: the Massim *kula* network, the Papuan Gulf *hiri* trade, across the Vitiaz Strait, and in the Admiralty Islands.

We are presently studying a portion of the A. B. Lewis Collection, some thirty-three hundred objects, obtained on the north coast of New Guinea.[1] This project is part of a larger research program under our direction at Field Museum designed to document and interpret the social, economic, and ritual diversity of Pacific Island communities.

Through systematic analysis of ethnographic artifacts, the A. B. Lewis Project is surveying the role that material culture played in shaping and maintaining patterns of diversity among local communities along the north coast. In so doing, the project seeks to demonstrate, moreover, that study of well-documented ethnographic collections of material culture leads to genuine anthropological insights: in this instance, to hypotheses on the role of the production, use, exchange, and trade of "material things" in the formation of social and economic networks along the coast (including offshore islands and communities in the adjacent hinterland).

We are in the opening stages of this research effort. Here we describe the interpretative field within which this project is an empirical component. And we draw on one of our current investigations at Field Museum to illustrate our work with material culture and its human context.

THEORETICAL BACKGROUND

In a recent paper Terrell (1988) argues that two major approaches are presently used by Pacific scholars to organize and interpret similarities and differences among island communities in the Pacific, today and in the past. In the first, Pacific prehistory is seen as holding the answer to questions long asked about the origins, migrations, and historical relationships of different preexisting races thought to have entered and colonized this part of the world at different times. In the other (somewhat more recent) approach, the Pacific Islanders are seen as a geographic set of local and regional populations, more or less in touch with each other, who have followed separate but often connected historical pathways of adaptation and culture change. This second approach looks for patterns of similarity and difference among the islanders and how they live to determine what circumstances, actions, and events, when combined, may explain their diversity.

Terrell (1988) also suggests that several underlying concepts are all basic to the first approach: the idea of progress, the idea of genealogy (specifically, the interpretative construction he refers to as "the principle of descent with migration and modification"), and the idea that language history can be depicted as a branching tree of linguistic identities. Significantly, sociocultural change and historical relationships, too, are seen from the vantage point of the first approach as a prospering family tree on which limbs, branches, and leaves are separate growths connected at points of common origin in times past.

Alternatively, the South Pacific viewed from the second perspective is an inter-

locking, expanding (and sometimes contracting), and ever-changing set of social, political, and economic subfields. We find it is less easy to identify common labels for the principal ideas, or images, underlying this interpretative position. Terrell has tentatively suggested two constructs: one is the metaphor of the "playing field," and the other is an image Darwin used to describe the interdependence and complexity of species communities, the metaphor of an "entangled bank."

The A. B. Lewis Project is a deliberately empirical exploration of a New Guinean entangled bank: that is, the complex web of human relationships found along the north coast. The project is informed by our conclusion that better field programs are needed to assay not only variation within particular character sets (for example, dialectal variation, artifact styles, or variation in malarial morbidity) but also the circumstances under which that variation occurs. Such studies are needed so that we can tease apart and weigh the varying contributions of the sources—adaptive, random, and historically inherited—contributing to human diversity. In a word, anthropological scholarship needs an enriched pool of ideas and empirical documentation witnessing the causes ("processes") of variation and diversity in language, biology, and customs.

PROCESSUAL STUDIES IN MELANESIAN ANTHROPOLOGY

As part of our current research program, we are holding a three-day working seminar at Field Museum in 1991 with the support of the Wenner-Gren Foundation for Anthropological Research. The purpose is to articulate a common understanding of the aims, advantages, limitations, and achievable priorities of regionally based anthropological research in Melanesia. The goals of the seminar, titled "Not in Isolation: Regional Studies in Melanesian Anthropology," will be twofold: to document and evaluate the current state of regional studies in Melanesian anthropology, and to facilitate the construction of a shared research agenda and a shared sense of methodology and purpose. We must emphasize that by "regional studies" we refer to scholarly research designed to document, analyze, and interpret human actions and intentions linking or joining different places (such as hamlets, villages, and localities) into larger, interconnected fields of human relationship and undertaking. We do *not* mean efforts to divide Melanesia into ecological or geographical "regions" or districts, defined apart from human use and undertakings.

Moreover, the A. B. Lewis Project is methodologically working to combine museum-based collections and archival research with new field studies: a union of proven research directions that offers unusual opportunities for scholarship aimed at more than the artistic and technological dimensions of "museum specimens." Linking museum-based research with field studies has been shown to be an effective way to explore the social, economic, and historical significance of material culture. Such a strategy also offers opportunities for systematic data collection on the context and local significance of craft/commodity production, trade exchange, and other kinds of social and economic interactions among communities.

RESEARCH POTENTIAL OF THE LEWIS COLLECTION

A. B. Lewis spent more time on the north coast (the area roughly stretching from Humboldt Bay to Astrolabe Bay) than in any other contiguous part of Melanesia.

He visited Humboldt Bay twice (in 1909 and 1912), spent nearly five months on the Aitape coast in 1909, and visited the area between Wewak and Madang for about five months in the following year.

Existing records at Field Museum concerning the Lewis Collection provide information on materials used in manufacture, object dimensions, place of manufacture, and place collected, as well as Lewis's general comments on form, style, and ornamentation. We are carrying out the following tasks in order to build a new integrated data base on objects in the collection from the north coast:

1. We are assembling all available catalogue, archival, and other documentary information on each object examined for retrieval during comparative study and distributional mapping.
2. Lewis's original catalogue records are being checked for accuracy and are being updated (where possible) through use of unpublished and published information.
3. A standard photographic record of each object is being made.
4. We are verifying and refining Lewis's object descriptions.
5. We are making maps of trade patterns, style and object distributions, and so forth.

Lewis's field notes and diaries give us much unpublished information on trade and interaction along the north coast. However, the examples of material culture preserved in the collection offer at least four kinds of primary anthropological data, the value of which may be less apparent than the obvious importance of Lewis's written field observations. These primary data may be summarized as follows:

1. A large portion of the collection from the north coast comprises objects that were traded or exchanged either as raw materials or finished products.
2. A substantial part of the collection consists of objects made in one community but collected by Lewis in another.
3. Because of the size of the collection, we are able to compile relatively complete inventories of the kinds of objects in use at a number of different locations along the coast.
4. The objects themselves are the primary source of data for assessing diversity in the material culture of this region through analysis of variation in form, style, size, function, materials used, and methods of manufacture.

HYPOTHESES ABOUT AREAL INTEGRATION

The north coast of New Guinea is a region long noted for its rich artistic and ritual traditions, elaborate trade networks, local craft specializations, and marked cultural (and ethnolinguistic) differentiation. Although scholars have long recognized the trade networks in this region as an important characteristic of these communities, we know surprisingly little in detail about these networks and, more im-

series of papers on intertribal relations on the north coast of New Guinea, Frank Tiesler (1969, 1970) developed a cultural materialist model of the evolution and culture history of north coast societies. His model is a complex one intended to explain why both Papuan-speaking and Austronesian-speaking communities along

the coast share a similar level and kind of cultural development ("für die Weiterentwicklung der Kultur. . . und deren Vereinheitlichung") distinct from neighboring areas: most markedly from Papuan groups in the hinterland.

Tiesler assumed that these Papuan "bush" communities would be much more similar to coastal Papuan groups were it not for intertribal relations centering on trade linking coastal and island communities. Tiesler's work is the first systematic interpretation of intergroup relations and cultural variation along this coast. He has drawn on a vast body of published information in making his assessments, and he offers plausible (but still largely untested) hypotheses about causal relationships between exchange networks and cultural diversity within this region.

Tiesler's synthesis of Marxist concerns about modes of production and cultural evolution, on one hand, and *Kulturkreis* interests in defining culture areas, on the other, raises several heuristically valuable hypotheses about the integration of ethic groups on the north coast. Specifically, Tiesler proposes that:

1. The north coast is a distinct culture area differing from neighboring areas such as Humboldt Bay, Astrolabe Bay, the middle Sepik, and the Papuan hinterland—from all which the north coast was largely isolated.
2. The single most important factor in the integration of communities along the coast was the uneven distribution of resources that created local shortages and surpluses of foodstuffs (especially sago) and other essential raw materials; these imbalances motivated intergroup trade based on exchange partnerships and also facilitated the development of specialized production centers.
3. Outrigger canoes introduced by Austronesian speakers provided a means of communication among widely separated communities; without these canoes, integration would have been difficult and much more narrowly restricted.
4. Consequently, the north coast has grown into a more or less independent network of intertribal relationships through which Papuan and Austronesian cultural elements have become blended into an (essentially) uniform and distinct regional culture.

We should add a comment here on what Lewis and other early visitors (such as Parkinson, Neuhauss, Friederici, and Schlaginhaufen) observed about social complexity along the north coast and adjacent islands. Measured in terms of settlement size, population density, horticultural intensity, volume of trade, size and diversity of local assemblages of material culture, relative wealth, and production levels of export commodities, Tiesler was almost certainly correct when he proposed that the greater material and social "complexity" of both Papuan- and Austronesian-speaking communities relative to communities in the hinterland is reflected in the greater volume and frequency of trade relations on the coast. Our research so far, however, suggests to us that this relationship is considerably more complex than Tiesler's model implies.

TESTING THESE AND OTHER HYPOTHESES

We are at too early a stage in our own research to support or refute these propositions empirically. What we feel is missing from them, however, is what might be

called an "organic sense of detail"—that is, a fuller sense of how trade and exchange actually work to integrate disparate communities, and how both differing patterns and kinds of intercommunity relationships may generate differing patterns and kinds of variability in material and social culture.

To illustrate, we present preliminary results from an exploratory study of a sample of 150 bone daggers—most made out of cassowary tibias (specifically, the distal portion of the tibiotarsus)—collected by A. B. Lewis and others from 16 localities along the north coast from Humboldt Bay to Hatzfeldhafen. Available information suggests these daggers were chiefly obtained from the place where they were manufactured; archival and published information alike indicate such daggers were *not* items customarily traded from place to place in the study region.[2] It may be surmised, therefore, that studying the variability of such objects may test Tiesler's hypothesis that cultural expressions within the region were more or less uniform because of canoe-facilitated travel and intercommunication.

Based on both present/absent and stylistic data, our work contradicts the uniformity hypothesis, showing that:

1. Far from being a uniform culture trait along the north coast, cassowary daggers were rarely made within the easternmost reaches of the region defined by Tiesler.[3]
2. Far from being restricted in their distribution to his north coast region, cassowary daggers were also manufactured to the west in the area of Humboldt Bay, Sko, and Vainimo.
3. Rather than being expressed as a stylistically uniform culture trait within their actual geographic range of distribution, cassowary daggers display at least three distinct style provinces within the spectrum of variation.
4. It is likely that a simple "blending through need and intercommunication" hypothesis cannot directly account for these empirical observations, both present/absent and variational, although at this stage of our work, this conclusion is still tentative.

Now do not misunderstand us; we are not asking that this small illustration be saluted as an earthshaking result. Perhaps, too, Tiesler's hypothesis about the unifying force of trade and exchange via Austronesian canoe is not entirely convincing—with or without evidence in its favor.[4] Our point, however, is this: We are able to go beyond Tiesler's assessment of the force of trade and exchange on this coast because of a well-provenienced museum collection of material culture (material things that, preservation permitting, could just as easily be archaeological as ethnographic).

We find ourselves in the position to supplement, and soon possibly to replace, an existing hypothesis about the integrative role of trade and exchange (an idea that is, let us all admit, soundly established in common sense) with a demonstration of how cultural variability in our study region may actually be patterned in space.

Pacific archaeologists are well aware that if—through field work, both anthropological and archaeological—we can add the dimension of time to our increased awareness of the patterns of human diversity on the north coast, we may perhaps also be able to see what circumstances, actions, and events, when combined, will help us explain such diversity.

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In the twelve months since this paper was first written considerable progress has been made in inventorying, photographing, and understanding Field Museum's north coast materials. The Lewis, Dorsey, Voogdt, and other collections from this study area have been inventoried to improve object descriptions and check provenience locations (see Table 1). Some twenty-five hundred objects have been photographed for museum records and for use in field work. Copies of these photographs have been deposited with the Papua New Guinea National Museum and the Institute of Papua New Guinea Studies.

Analyses of these north coast collections so far include studies on the context in which the Lewis Collection was assembled (Welsch 1989*a*), on Lewis's contribution to understanding trade linkages on the coast (Welsch 1989*b*), on the distribution of specialized production centers (Nadolski 1989), ecological and structural positions of communities within these local trade networks (Hsiao 1989), and the role of male and female production in trade networks (Ashbaugh in prep.).

We have also investigated (Welsch, Nadolski, and Terrell in prep.) the degree to which observed similarities and differences among these ethnographically collected village "site assemblages" co-vary with known ethnic diversity on this coast (as shown by language and language-group affiliation). Our results indicate that these material culture assemblages distributed along 400 km of coastline, which are drawn from 55 language communities belonging to 27 language families and 6 higher level phyla (5 Papuan and 1 Austronesian), show strong overall similarity—so much so that without knowledge of their ethnographic context, archaeologists working in the Pacific might assume they all reflect a single ethnic "cultural complex" similar to the so-called Lapita Cultural Complex (Terrell 1989).

However, adequate quantification and careful statistical analysis (largely lacking for Lapita; see Kirch and Hunt 1988) can successfully assign these assemblages to their different language communities. This observation suggests to us that archaeologists who would interpret Lapita assemblages as showing us the material expression of a single ethnically unified cultural complex may be committing the statistician's Type II Error: they may be accepting the hypothesis of no difference when in fact it is false.

In April and May 1990, we conducted a reconnaissance survey of the Aitape coast in the West Sepik (Sandaun) Province. This survey has established several facts.

First, despite two world wars and 80 years of socioeconomic development along this coast, a considerable amount of the material collected by Lewis around Aitape in 1909 is still being made there in 1990 with—as one might expect—some modernization in the raw materials, methods of manufacture, and designs incorporated in today's handicrafts.

Second, despite the presence today of modern marketplaces and the obvious importance of a cash economy, direct exchanges of goods and foodstuffs still play an important role in this area's economy.

Third, people on this coast still know a great deal about how their forefathers and foremothers handled past exchange relationships during early colonial and precontact times. We conducted several interviews to discover the feasibility of making systematic inquiries into how these past networks functioned and how they have

TABLE 1. NUMBER OF ARTIFACTS AMONG FIELD MUSEUM'S HOLDINGS FROM VARIOUS LOCALITIES ON THE NORTH COAST IN THE LEWIS, DORSEY, VOOGDT, AND UMLAUFF COLLECTIONS (COLLECTED CA. 1908–1912)

LOCALITY ON THE NORTH COAST WHERE COLLECTED	CODE	NUMBER OF ARTIFACTS				
		LEWIS[a]	DORSEY	VOOGDT	UMLAUFF	TOTAL
Tanah Merah	105	3				3
Humboldt Bay	106	243		2		245
Lake Sentani	108	1				1
Arso	109	1				1
Sko District	111	101				101
Wutong Area	112			81		81
Mosu	113					
Angriffshafen area	114	157	219	317	81	774
Interior Wanimo	115					
Negira	116					
Leitere	117		108	87	9	204
Interior Leitere	118	1				1
Seer	121					
Sissano	124	286	79	1	55	421
Warapu	125	46	108	12	111	277
Arop	126	27				27
Int. Sissano–Arop	127	4				4
Malol	128	122				122
Eitape	131	19				19
Interior Eitape	132	45				45
Tumleo	134	100	162	226		488
Ali	135	355	1	1		357
Seleo	136	33	206	94	32	365
Angel	137	28	194	43	9	274
Walman Coast	138					
Paup	141					
Yakamul	143					
Ulau	145					
Swain	147					
Matapau	151					
Sawoum–But–Smain	153		26		6	32
Dakur–Kofi Area	154		20		1	21
Dallmannhafen area	156	20	18	63	257	358
Int. Dallmannhafen	157	2		12	19	33
Mom	158	10				10
Interior Mom	159					
Tarawai Island	161		175		19	194
Walis Island	162		69	3	8	80
Unei Island	163					
Karsau Island	164					
Juo Island	165					
Kairiru Island	166					
Mushu Island	167	27	19	12	5	63
Kaiep	171					
Kaup	173					
Murik	175	138				138
Kirau	177	172			16	188
Interior Kirau-Mendam	178	91				91
Mendam	179	23				23
Sepik Mouth at Coast	181	8		109	7	124
Kopar	182		22			22
Singerin	183		10	110		120
Bin	184		59			59

TABLE 1. *Continued.*

LOCALITY ON THE NORTH COAST WHERE COLLECTED	CODE	NUMBER OF ARTIFACTS				TOTAL
		LEWIS[a]	DORSEY	VOOGDT	UMLAUFF	
Ibundo	186		40	37		77
Olem	188		76			76
Pagem (Magem)	189	29	75	71	24	199
Mom	191					
Klinjam	192	7				7
Kanduonum	193	14				14
Simar	194	32				32
Kararau	195	122				122
Malu	197	5				5
Yambon	198	24				24
Tschessbandi	199	78				78
Watam	201	92				92
Ramu Mouth	203	32			1	33
Lower Ramu	204					
Kayan	205	169				169
Interior Kayan	206	110				110
Hansa Bay	207	125		2	11	138
Interior Hansa Bay	208	8				8
Manam Island	209	23		1		24
Potsdamhafen	211	27	184	43	118	372
Bogia	213					
Dagoi	215	14				14
Banaputu	217	12				12
Swaro	218	6				6
Wogeo Island	221		96	32		128
Koil Island	222		93			93
Wiei Island	223					
Blupblup Island	224					
Kadowar Island	225					
Bam Island	226					
Hatzfeldhafen-Dugumur	231	5				5
Tobenam	233	19				19
Bushim	234	17				17
Cape Gourdon	235			6	1	7
Simbine	236	14				14
Kronprinzhafen	241	26		65		91
Eitel Fr. Hafen	243	9				9
Malas	245					
Prinz Adalberthafen	246					
Int. Prinz Adalb. H.	247	19				19
Karkar	248	11		40	1	52
Rich Island (Bagabag)	249	1				1
Matuka	251					
Alexishafen	253					
Fr. Wh. Hafen	255	37			1	38
Int. Fr. Wh. Hafen	256	25				25
Bilibili-Yabob	257					
Astrolabe Bay area	261	37		26	3	66
	Total	3212	2039	1516	795	7562

[a] Excludes artifacts in the Lewis Collection obtained outside the study area but manufactured within it.

changed since Lewis's time. Our preliminary findings suggest that the movement of goods along the coast in former times was even more important and more complex than we had previously reconstructed from Lewis's 1909 field data.

Fourth, all of the seven communities in the Aitape area that we visited in 1990 still exhibit individual differences in language, culture, and subsistence strategies despite the increasing pace of economic development, and their known history of profound trade and social interaction in the past—each with the others as well as with many other communities on the north coast.

Fifth, while the totality of handicrafts and other items of material culture that we found in each of these communities differs from village to village—possibly hinting at real differences in local resource availability, village style traditions, and the persistence of local craft specialization—we observed an unmistakable commonality about all of the modern material culture assemblages observed.

Sixth, economic relations in the Aitape area still link together, on a region-wide scale, many communities having different languages, available resources, and craft specializations. We see the Aitape coast as a set of distinct communities whose economies continue to change, evolve, and develop as a regional phenomenon.

Therefore, to understand how these communities, each having its own distinct, self-conscious identity, have changed since 1909, we conclude that we will have to learn about more than just what has been happening *within* each of these villages during this century. In future years, we will have to learn more about the complex networks of relations—the "entangled bank" (Terrell 1988) of economic, social, and political ties—that have joined these village communities into larger spheres of involvement throughout this century.

Finally, we see no reason to assume that the Aitape area as a regional social and economic phenomenon is recent or postcontact. While details of inter-village relations and interactions have undoubtedly changed over the years, both our observations in the West Sepik Province today and those we are drawing from old museum collections—too long neglected by anthropologists as only that, "just old museum collections"—are telling us plainly that relationships on the north coast "beyond the village" have undoubtedly been in existence since long before the period of first European contact in the nineteenth century.

NOTES

1. There are also some four thousand objects from the North Coast collection at Field Museum assembled around the same time by Otto Finsch, Richard Parkinson, George Dorsey, and others; these objects are a secondary resource—the value of which is greatly enhanced by systematic study of the Lewis Collection.
2. Only one dagger in Field Museum's collection from the north coast is known to have been traded (from Yakamul to one of the Berlinhafen Islands). Mead (1938) notes daggers were sometimes traded in the Arapesh, but this observation primarily concerns the mountain Arapesh living well away from the coast, rather than the coastal Arapesh living in our study area. Tiesler (1970) notes that cassowary bones moved between the coast and the Shouten Islands, especially Wogeo, where cassowaries are not present. Such exceptions do not alter the fact that stylistically, daggers reflect local expressions of form, style, and use, rather than the effect of trade on such variables directly.
3. The two daggers in our sample from Murik Lakes and east of the Sepik River are human femurs but suggest that daggers may have been present in this eastern area. Daggers appear frequently in Lewis's photographs from around Aitape, but not in his photographs from this eastern area. The form of the handles in these two examples is characteristic of the Middle Sepik in which the knuckle has been removed. Kathy Barlow (pers. comm. 1989) did not see daggers in the Murik Lakes, while David Lipset (pers. comm. 1989) did see them associated with secret men's ritual paraphernalia. Thus, while

daggers were to some extent present in the east, they served different social ends there than in the western parts of our study area.

4. Lewis's data on trade linkages along the north coast confirm Tiesler's (1969) assertion that trade was more intensive between Seer (Serra) and Maondo than to adjacent areas (see Welsch 1989*b*). Our analysis, however, suggests that inland-to-coast and inland-to-island interaction was far more important than Tiesler's published sources would indicate (Welsch 1989*b*). Lewis's data on trade linkages on the north coast provide nearly the same amount of information about trade as all published sources between the 1890s and the 1940s. There is virtually no overlap in the two data sets, suggesting that the Lewis data are essentially complementary to the 70 sources considered by Tiesler (1970). We assume that much more remains to be known about these north coast trade networks.

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REFERENCES

ASHBAUGH, LESLIE
in prep. The role of male and female production of trade items in the Berlinhafen area.

HSIAO, BARBARA
1989 Material culture as a window on ecological and structural positions of socio-economic networks on the North Coast of New Guinea. Paper presented at the Meetings of the American Anthropological Association, Washington, D.C.

KIRCH, PATRICK V., AND TERRY L. HUNT, EDS.
1988 *Archaeology of the Lapita Cultural Complex: A Critical Review*. Thomas Burke Memorial Washington State Museum Research Report No. 5. Seattle: The Burke Museum.

MEAD, MARGARET
1938 The Mountain Arapesh: An importing culture. *American Museum of Natural History Anthropological Papers* 36:139–349.

NADOLSKI, JOHN A.
1989 The distribution of specialized production centers on the North Coast of New Guinea. Paper presented at the Meetings of the American Anthropological Association, Washington, D.C.

TERRELL, JOHN E.
1988 History as a family tree, history as an entangled bank: Constructing images and interpretations of prehistory in the South Pacific. *A* 62:642–657.
1989 Commentary: What Lapita is and what it isn't. *A* 63:623–626.

TIESLER, FRANK
1969 Die Intertribalen Beziehungen an der Nordküste Neuguineas im Gebietder Kleinen Schouten-Inseln (I). *Abhandlungen und Berichte des Staatlichen Museums für Völkerkunde Dresden* 30:1–122.
1970 Die Intertribalen Beziehungen an der Nordküste Neuguineas im Gebietder Kleinen Schouten-Inseln (II). *Abhandlungen und Berichte des Staatlichen Museums für Völkerkunde Dresden* 31:111–195.

WELSCH, ROBERT L.
1989*a* Context and meaning of the A.B. Lewis collection: An example from the North Coast of New Guinea. Paper presented at "Object Informs, Objects in Form: The Ethnography of Oceanic Art," a conference sponsored by the Baltimore Museum of Art and Johns Hopkins University, Baltimore.
1989*b* A. B. Lewis's contribution to understanding trade networks on the North Coast of New Guinea. Paper presented at the Meetings of the American Anthropological Association, Washington, D.C.

WELSCH, R. L., J. A. NADOLSKI, and J. E. TERRELL
in prep. Ethnicity, material culture and diversity on the North Coast of Papua New Guinea.